

REMARKS/ARGUMENTS

The Applicants appreciate the Examiner's time and efforts in granting interviews on May 24, 2006 and May 25, 2006. The Applicants and Examiner discussed the current Restriction Requirement and the group of "enzymes involved in A-CoA metabolism." The Examiner reviewed the claims and recommended election of a single group. The Examiner further stated that on allowance of novel claims, the Examiner would review groups I-VIII to identify any additional allowable subject matter, if applicable.

Amendments to Claim 1 are supported in the original application p. 6, ¶33-35, p. 7, ¶38-40, and Fig. 1&2.

Applicants provisionally elect Group VIII: Claims 1-5, directed to manipulating cell metabolism by elevating one or more enzymes selected from PANK, PDH, and ATF2 **with traverse**. The present Restriction Requirement is improper. There are 27 separate groups for 26 claims, **only 9 independent** claims. The Examiner has used a Restriction Requirement to separate legitimate members of a Markush Group. By restricting each of these enzymes into separate inventions, the Examiner has placed an undue burden on the applicant dramatically increasing application costs. The Markush Group of "enzymes involved in A-CoA metabolism" are exemplified by PDH, PFL, POR, PANK, and CoAD. The "enzymes involved in A-CoA metabolism" are related functionally as each metabolizes CoA or CoA derivatives. A search of engineered bacterial cells with overexpression of the enzymes demonstrated in the present application will produce an overlapping set of results. Thus the enzymes are **functionally related** and a search of the field **will not** place an undue burden on the examiner.

On allowance of the elected claims, the Applicants respectfully request the Examiner review the remaining members of the Markush Group for allowability. Applicants retain the right on allowance to rejoin species or inventions that may be eligible for rejoinder. Additionally, Applicants retain the right to petition from the Restriction Requirement under 37 CFR 1.144. Applicants again appreciate the Examiner's time in granting an interview and respectfully request the Examiner contact them regarding the present Restriction Requirement if there are any further questions.

In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to pass this application to issue. No fees are believed to be due for this submission. However, should there be any additional fees required, please charge such additional fees to Deposit Account No. 50-3420 (reference 31175413-005002 MDB)

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Respectfully submitted,
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